

Dongfeng Cummins Curve and Datasheet

Engine Type: ISDe230 30(Truck)

Curve Number: FR92157

Rev00 Date of Issue: 05/20/2007



Dongfeng Cummins Engine Co.,Ltd

Engine Performance Curve FR92157 EURO 3

Engine Model: ISDe230 30

Engine Configuration: D313003BX03

Advertised Power: 169 kW @ 2500 rpm

CPL: 1995

230 PS @ 2500 rpm

Peak Torque: 900 N.m @ 1400 rpm

Displacement: 6.7L

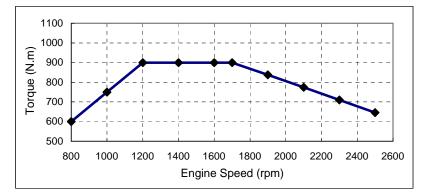
Bore: 107 mm

Aspiration: Turbocharged & Charge Air Cooled

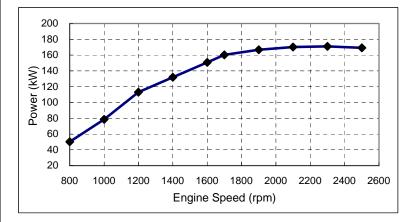
Cylinders: 6

Stroke: 124 mm

Fuel System: Bosch (HPCR)



Torque	
N.m	
600	
750	
900	
900	
900	
900	
838	
774	
710	
646	
	N.m 600 750 900 900 900 900 838 774 710



	Power	
rpm		kW
800		50
1000		79
1200		113
1400		132
1600		151
1700		160
1900		167
2100		170
2300		171
2500		169

Performance data shown is nominal, and is to 80/1269/EEC(as amended) conditions of 990mbar barometric pressure and 25 deg C air intake temperature.

All data are based on the engine operating with fuel system, water pump, lubricating oil pump and with inle restriction and exhaust restriction at or below datasheet limits. Not included are compressor, fan, alternator, optional equipment and driven components.



Dongfeng Cummins Engine Co.,Ltd

Engine Performance Curve FR92157

Compression Ratio: 17.3:1 Air Intake System Max. temperature rise between ambient air and turbo air inlet: - ℃ 15 Max. intake restriction with dry type air cleaner, with clean filter - kPa 2.9 Medium Duty: - kPa 3.7 Meav. puty: - kPa 6.2 Max. intake restriction with dirty filter: - kPa 6.2 Charge Air Cooling - ℃ 30 Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance - mm dia 75 Min. unaided cold start temperature: - 12 ℃ @ 120 average rpm Min. aided cold start temperature: - 24 ℃ @ 120 average rpm	General	
Max. temperature rise between ambient air and turbo air inlet:		GB 17691-2005
Max. temperature rise between ambient air and turbo air inlet: - ℃ 15 Max. intake restriction with dry type air cleaner, with clean filter - kPa 2.9 Medium Duty: - kPa 3.7 Meav. Duty: - kPa 6.2 Max. intake restriction with dirty filter: - kPa 6.2 Charge Air Cooling - ℃ 30 Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: - 12 ℃ 2120 average rpm Min. aided cold start temperature: - 24 ℃ 2120 average rpm Performance Data Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Compression Ratio:	17.3:1
Max. intake restriction with dry type air cleaner, with clean filter Ac Pa 2.9 Heavy Duty:	Air Intake System	
Heavy Duty:	·	15
Max. intake restriction with dirty filter:	Medium Duty: kPa	2.9
Charge Air Cooling Max. temperature rise between ambient air and intake manifold: Max. △P between turbo out and manifold in: Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: -12 ℃ @120 average rpm Min. aided cold start temperature: -24 ℃ @120 average rpm Performance Data Idle Speed: Maximum no load governed speed: Maximum no load governed speed: Maximum over speed capability(15secs max.): Maximum over speed capability(15secs max.): Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Heavy Duty: kPa	3.7
Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance - mm dia 75 Win. unaided cold start temperature: - 12 ℃ @ 120 average rpm Min. aided cold start temperature: - 24 ℃ @ 120 average rpm Performance Data - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Max. intake restriction with dirty filter:	6.2
Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance - mm dia 75 Win. unaided cold start temperature: - 12 ℃ @ 120 average rpm Min. aided cold start temperature: - 24 ℃ @ 120 average rpm Performance Data - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Charge Air Cooling	
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Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: — mm dia 75 Cold Start Performance Min. unaided cold start temperature: — 12 ℃ @ 120 average rpm Min. aided cold start temperature: — 24 ℃ @ 120 average rpm Performance Data Idle Speed: — rpm 600 - 800 Maximum no load governed speed: — rpm 2850 Maximum over speed capability(15secs max.): — rpm 4200 Maximum altitude for continuous operation: — m TBD Clutch engagement torque at 800rpm: — N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: — kPa 413	Max. △P between turbo out and manifold in: kPa	13.5
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Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: -12 °C @ 120 average rpm Min. aided cold start temperature: -24 °C @ 120 average rpm Performance Data Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Exhaust System	
Min. unaided cold start temperature:	Max. back pressure imposed by complete exhaust system: kPa	10
Min. unaided cold start temperature:	Exhaust pipe size normally accepable: mm dia	75
Min. aided cold start temperature: -24 °C @ 120 average rpm Performance Data Idle Speed: -rpm 600 - 800 Maximum no load governed speed: -rpm 2850 Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Cold Start Performance	
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Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: - kPa 413	·	o ,
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Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Maximum no load governed speed:rpm	2850
Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413		4200
Clutch engagement torque at 800rpm:		
When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: kPa 413	·	
Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: kPa 413		010
		440
Approximate engine retardation:kW TBD	, , , , , , , , , , , , , , , , , , , ,	_
	Approximate engine retardation: kW	IRD

Engine	Oil	Air to	Air From Turbo		Exhaust	Exhaust	Fuel	ust Fuel	Coolant	Heat Re	jection	Friction
Speed RPM	Pressure kPa	Turbo m³/min	Flow kg/min	Pressurek Pa	Flow m³/min	Temp ℃	Consumption kg/hr	Flow I/min	Coolant kW	Air kW	Power kW	
2500	302.8	14.95		150.7		439.661	220	255.95	82.8	27.6	38.0	
2300	300.9	14.34		154.3		501.4		235.8333	85.7	26.9	30.6	
1400	205.7	8.62		130.4		519.06		145.7833	65.0955	15.8324	16.7	

All values within ±5% Base engine data refer to Datasheet D313003BX03

All data subject to change without notice. Dongfeng Cummins Engine Co., Ltd